DETAILED ACTION

Preliminary Amendment:

1. The preliminary amendment to the sequence listing, filed on 27 May 2005 and the amendment filed with this response, (11/02/2007) have both been entered.

Election/Restriction:

2a. Applicant's election of the invention of Group I (original claims 1-10 and new claims 23, 25, 27, 29, 31 and 34-36) filed on 02 November 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The restriction requirement is still deemed proper and is therefore made FINAL.

Status of Claims:

2b. Claims 11-22 have been cancelled and new claims 23-36 have been added. Thus claims 1-10 and 23-36 are pending, of which claims 11-10, 23, 25, 27, 29, 31 and 34-36 are drawn to the elected invention and are therefore under consideration. Claims 24, 26, 28, 30 and 32 are withdrawn from consideration by the Examiner as they are drawn to non-elected inventions.

Specification:

3a. The amendment to the specification referencing the prior parent applications is acknowledged. No new matter is introduced.

3b. It is acknowledged that the paper copy of the sequence listing and the computer readable of the sequence listing have been filed. No new matter has been added.

3c. The specification recites raw sequences on pages 56-58, however, these sequences are not identified by sequence identifiers as required by 37 C.F.R § 1.821-1.825. Appropriate correction is required.

Priority:

4a. Based on the information given by Applicants and an inspection of the patent applications, the Examiner has concluded that the subject matter defined in this application is supported by the disclosure in PCT Application serial no. PCT/JP00/14854 filed on 20 November 2003. Thus, the effective filing date is 20 November 2003.

4b. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan (2002-349015) on 11 November 2002. It is noted, however, that applicant has not filed a certified copy of the 2002-349015 application as required by 35 U.S.C. 119(b).

Claim Rejections Under 35 U.S.C. § 101:

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1, 2, 4-5, 8, 23, 25, 33 and 34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. These

claims recite " ….a cell..." or" ….a protein..." or " ….a gene..."which encompass the cell, the protein or the gene as they occur in nature. However, since Applicants, apparently, do not intend to claim a naturally occurring products amendment of the claim to show the hand of man would obviate this rejection. It is suggested that the claims be amended to recite "an isolated host cell" or " an isolated protein" or " an isolated nucleic acid". Appropriate correction is required.

Claim Rejections - 35 U.S.C. § 112, First Paragraph:

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6a. Claims 4-10, 23, 25, 29, 31 are under 35 U.S.C. § 112, first paragraph, because the specification, while being enabling a an isolated cell comprising a vector comprising an isolated nucleic acid encoding the polypeptide of SEQ ID NO:2, does not reasonably provide enablement for a therapeutic agent for treating a disease that is able to be ameliorated by enhancing type I interferon production, said agent comprising a cell comprising a vector that is comprised a gene encoding the polypeptide of SEQ ID NO:2. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

Claims 4-10 are drawn to a therapeutic agent for treating unidentified diseases. Claims 23, 25, 29 and 31, are drawn to a protein having amino acids 394-532 of SEQ ID NO: 2, in which one or more amino acids are replaced,

deleted, inserted and/or added, and having a property of specifically binding to mammalian Toll- like receptor 3 and a property of inducing type I interferon production, a gene encoding such, a recombinant expression vector comprising said gene, a transformed host cell comprising said vector. The specification describes amino acids 394-532 of SEQ ID NO:2 as being the TIR domain, (page 10, 2nd paragraph). The specification contemplates mutants having amino acid at position 434 of SEQ ID NO:2, replaced, deleted, or mutants that are deficient in binding TLR3 or deficient in inducing type I interferon production, (see pages 10-11). The specification teaches mutants of TICAM-1, wherein amino acids 1-288 or 1-386 of SEQ ID NO:2 have been deleted, and a mutant having, wherein amino acids 1-386 and 557-712 have been deleted, thus having only the TIR domain, (Δ288, (Δ386 and TICAM-1.TIR, respectively), see page 49 and Example 9. The specification shows that these TICAM-1.TIR mutant was able to induce interferon β production, (see figure 12). Only the production of interferon β, not all type I interferons was demonstrated. However, while the specification discloses these three mutants and also provides general guidance regarding a single amino acid conservative substitution or selection of functional fragments, it does not enable the full scope of the claimed invention. Applicant's claimed invention includes modifications by multiple substitutions and/or deletions of amino acid residues between amino acids 394-532 of SEQ ID NO: 2. Applicant fails to teach how SEQ ID NO: 2 can be modified in order to obtain polypeptides having both the structural and functional properties as recited in the claims. In addition, the prior art teaches that conservative amino acid substitutions do not

necessarily result in a predictable result. For example, Lazar et al (Mol. Cell. Biol., Vol. 8, pp. 1247-1252, 1988) showed that the conservative substitution of glutamic acid for aspartic acid at position 47 reduced biological function of transforming growth factor alpha while non-conservative substitutions with alanine or asparagine retained the protein function. Wells,(1990, Biochemistry 29:8509-8517), also documented the unpredictability of the relationship between sequence and function, albeit that certain specific sequences may be found to be conserved over proteins of related function upon a significant amount of further research Furthermore, the courts have held that:

" It is the specification, not the knowledge of one skilled in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement" and that: ["(P)atent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable. While every aspect of a generic claim certainly need not have been carried out by an inventor, or exemplified in the specification, reasonable detail must be provided in order to enable members of the public to understand and carry out the invention". Genentech Inc. v. Novo Nordisk A/S, 108 F.3d 1361, 1366, 42 USPQ2d 1001, 1005 (Fed. Cir. 1997):

In this case, Applicant is expecting others to identify regions other than those disclosed in Example 9 that are critical for the functional integrity of the polypeptide of SEQ ID NO:2, and determine which among infinite possible modifications would retain the desired activity, and then test those modified variants through for the retention of the desired activity.

With respect to claims 4-10, the specification fails to provide enablement commensurate with the preamble. The specification discloses that the polypeptide of SEQ ID NO:2 is derived from human and designates it as “TICAM-

1", (p. 8, lines 6-10). The specification further teaches that TICAM-1 specifically binds to TLR3 and can enhance type I interferon production, (p. 8, lines 3rd paragraph). The specification goes on to speculate that type I interferon, has anti-viral and anti-tumor effects and thus administration of TICAM-1 could treat cancer and infectious diseases, (p. 9, 2nd paragraph). However, there are no teachings as to if administration of TICAM-1, is actually beneficial. There is further no guidance to indicate in which diseases TICAM-1 "plays a role". The statement that TICAM-1 administration can induce type I interferon production, in cancer or infected individual is not sufficient guidance to identify to one of skill in the art which diseases actually involve TICAM-1. What is needed are teachings to indicate that TICAM-1 itself is associated with particular conditions, and what those particular conditions are. Without further guidance to indicate what proteins, if any, are affected by TICAM-1, and in what diseases it is involved, it would require undue experimentation for the skilled artisan to practice the invention as broadly claimed. No working examples are provided and there are no compensatory examples in the prior art and there is no other guidance to indicate to the skilled artisan that the methods could be practiced as claimed.

6b. Claim 23, 25, 29 and 31 arerejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

Claims 23, 25, 29 and 31 are drawn to a protein having amino acids 394-532 of SEQ ID NO: 2, in which one or more amino acids are replaced, deleted, inserted and/or added, and having a property of specifically binding to mammalian Toll- like receptor 3 and a property of inducing type I interferon

production, a gene encoding such, a recombinant expression vector comprising said gene, a transformed host cell comprising said vector. The claims encompass a protein having one or more amino acid replacements or deletions that retain a desired activity. The specification teaches mutants of TICAM-1, wherein amino acids 1-288 or 1-386 of SEQ ID NO:2 have been deleted, and a mutant having, wherein amino acids 1-386 and 557-712 have been deleted, thus having only the TIR domain, (Δ288, (Δ386 and TICAM-1.TIR, respectively, however, the disclosure of the these three mutants fails to disclose written description for the encompassed genus of polypeptides having amino acids 394-532 of SEQ ID NO:2, and having one or more amino acids are replaced, deleted, inserted and/or added.

To provide evidence of possession of a claimed genus, the specification must provide sufficient distinguishing identifying characteristics of the genus. The factors to be considered include disclosure of compete or partial structure, physical and/or chemical properties, functional characteristics, structure/function correlation, methods of making the claimed product, or any combination thereof. In this case, the only factor present in the claim is the recitation of "one or more amino acids are replaced, deleted, inserted and/or added, and the ability to retain a desired activity. Even though these changes are to be made at a specific range of the polypeptide of SEQ ID NO:2, there is no disclosure as to how many insertions, deletions, replacements to be made to the polypeptide of SEQ ID NO:2, in order to preserve the desired activity. Accordingly, in the absence of

sufficient recitation of distinguishing identifying characteristics, the specification does not provide adequate written description of the claimed genus.

Claim Rejections - 35 USC § 112, second paragraph:

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 4-6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6a. Claims 3-6, fail to further limit the invention recited in claim 1, because the recitation of the intended use, does not further limit the structure recited in claim 1. Appropriate correction is required.

6b. the claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with idiomatic errors.

Claim Rejections - 35 USC § 102(b)

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7a. Claims 1-10 are rejected under 35 U.S.C § 102(b) as being anticipated Lal et al, (WO200078954-A2, issued on 28 December 2000).

Claims 1-10 encompass a protein comprising the amino acid sequence set forth in SEQ ID NO:2, or comprising amino acids 394-532 or SEQ ID NO:2, a gene encoding such, an expression vector comprising said gene and a host cell comprising said vector.

Lal et al disclose an isolated polypeptide that shares 100% amino acid identity to amino acid residues 394-532 of SEQ ID NO:2 of the instant invention, nucleic acid encoding such, an expression vector comprising said gene and a host cell comprising said vector, (see claims, SEQ ID NO:3 on pages 94-95 and pages 63-64). Also see below, SEQUENCE COMPARISON "A" comparing instant SEQ ID NO:2, to the sequence of the reference).

Therefore Lal et al reference anticipates the instant claims 1-10, 23, 25, 27, 29, 31, 33-36 in the absence of any evidence to the contrary.

7B. Claims 1-10 are rejected under 35 U.S.C § 102(b) as being anticipated Accession Number: O75532, published on 01 November 1998.

Claims 1-10 encompass a protein comprising the amino acid sequence set forth in SEQ ID NO:2, or comprising amino acids 394-532 or SEQ ID NO:2, a gene encoding such, an expression vector comprising said gene and a host cell comprising said vector.

The publication Accession Number: O75532 discloses an isolated polypeptide that shares 100% amino acid identity to amino acid residues 394-532 of SEQ ID NO:2 of the instant invention, nucleic acid encoding such, an expression vector comprising said gene and a host cell comprising said vector,

(see, SEQUENCE COMPARISON "B" comparing instant SEQ ID NO:2, to the sequence of the reference).

Therefore Accession Number: O75532 al reference anticipates the instant claims 1-10 in the absence of any evidence to the contrary.

7C. Claims 1-10, 23, 25, 27, 29, 31, 33-36 arerejected under 35 U.S.C § 102(b) as being anticipated Matsuda et al, (WO2002053737-A1, issued on 11 July 2002).

Claims 1-10, 23, 25, 27, 29, 31, 33-36 encompass a protein comprising the amino acid sequence set forth in SEQ ID NO:2, or comprising amino acids 394-532 or SEQ ID NO:2, a gene encoding such, an expression vector comprising said gene and a host cell comprising said vector.

Matsuda et al disclose an isolated polypeptide that shares100% amino acid identity to the polypeptide of SEQ ID NO:2 of the instant invention, nucleic acid encoding such, an expression vector comprising said gene and a host cell comprising said vector, (see SEQ ID NO:154, pages 664-669). Also see below, SEQUENCE COMPARISON "C" comparing instant SEQ ID NO:2, to the sequence of the reference).

Therefore Matsuda et al reference anticipates the instant claims 1-10, 23, 25, 27, 29, 31, 33-36 in the absence of any evidence to the contrary. With respect to functional limitations recited in claim 23, the polypeptide of Matsuda et al would be expected to have the recited activity, since the two polypeptide share 100% identity, they would inherently have the same activity.

SEQUENCE COMPARISON "A"

```
Database :        A_Geneseq_200711:*

RESULT 3
AAB61303
ID   AAB61303 standard; protein; 498 AA.
XX
AC   AAB61303;
XX
DT   30-MAR-2001  (first entry)
XX
DE   Human transcriptional regulator protein #3.
XX
KW   Human; transcriptional regulator protein; TXREG.
XX
OS   Homo sapiens.
XX
PN   WO200078954-A2.
XX
PD   28-DEC-2000.
XX
PF   15-JUN-2000; 2000WO-US016766.
XX
PR   18-JUN-1999;   99US-0140109P.
XX
PA   (INCY-) INCYTE GENOMICS INC.
XX
PI   Lal P,  Yue H,  Tang YT,  Baughn MR,  Azimzai Y,  Tran B;
XX
DR   WPI; 2001-041425/05.
XX
PT   Isolated polypeptide with a human transcriptional regulator protein
PT   sequence is useful for the diagnosis, prevention and treatment of
PT   disorders associated with the immune, reproductive and cardiovascular
PT   systems.
XX
PS   Claim 1; Page 94-95; 142pp; English.
XX
CC   The present invention relates to human transcriptional regulator protein
CC   (TXREG) sequences. The antagonist and an agonist of the proteins of the
CC   invention are used to treat disorders associated with decreased or
CC   increased expression or activity of TXREG
XX
SQ   Sequence 498 AA;

  Query Match             100.0%;  Score 715;  DB 4;  Length 498;
  Best Local Similarity   100.0%;  Pred. No. 1.7e-81;
  Matches  139;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 FYNFVILHARADEHIALRVREKLEALGVPDGATFCEDFQVPGRGELSCLQDAIDHSAFII 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        180 FYNFVILHARADEHIALRVREKLEALGVPDGATFCEDFQVPGRGELSCLQDAIDHSAFII 239

Qy         61 LLLTSNFDCRLSLHQVNQAMMSNLTRQGSPDCVIPFLPLESSPAQLSSDTASLLSGLVRL 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        240 LLLTSNFDCRLSLHQVNQAMMSNLTRQGSPDCVIPFLPLESSPAQLSSDTASLLSGLVRL 299

Qy        121 DEHSQIFARKVANTFKPHR 139
              |||||||||||||||||||
Db        300 DEHSQIFARKVANTFKPHR 318
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SEQUENCE COMPARISON "B"

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Database :       UniProt_12.1:*

RESULT 2
O75532_HUMAN
ID   O75532_HUMAN            Unreviewed;       416 AA.
AC   O75532;
DT   01-NOV-1998, integrated into UniProtKB/TrEMBL.
DT   01-NOV-1998, sequence version 1.
DT   21-AUG-2007, entry version 29.
DE   Putative uncharacterized protein (Fragment).
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Euarchontoglires; Primates; Haplorrhini;
OC   Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Brain;
RX   MEDLINE=96207227; PubMed=8619474; DOI=10.1006/abio.1996.0138;
RA   Andersson B., Wentland M.A., Ricafrente J.Y., Liu W., Gibbs R.A.;
RT   "A "double adaptor" method for improved shotgun library
RT   construction.";
RL   Anal. Biochem. 236:107-113(1996).
RN   [2]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Brain;
RX   MEDLINE=97264341; PubMed=9110174;
RA   Yu W., Andersson B., Worley K.C., Muzny D.M., Ding Y., Liu W.,
RA   Ricafrente J.Y., Wentland M.A., Lennon G., Gibbs R.A.;
RT   "Large-scale concatenation cDNA sequencing.";
RL   Genome Res. 7:353-358(1997).
RN   [3]
RP   NUCLEOTIDE SEQUENCE.
RC   TISSUE=Brain;
RA   Yu W., Gibbs R.A.;
RL   Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.
CC   ---------------------------------------------------------------------
CC   Copyrighted by the UniProt Consortium, see http://www.uniprot.org/terms
CC   Distributed under the Creative Commons Attribution-NoDerivs License
CC   ---------------------------------------------------------------------
DR   EMBL; AF070530; AAC28630.1; -; mRNA.
DR   UniGene; Hs.29344; -.
DR   Ensembl; ENSG00000127666; Homo sapiens.
DR   HGNC; HGNC:18348; TICAM1.
DR   ArrayExpress; O75532; -.
DR   GO; GO:0016020; C:membrane; IEA:InterPro.
DR   GO; GO:0004888; F:transmembrane receptor activity; IEA:InterPro.
PE   2: Evidence at transcript level;
FT   NON_TER       1      1
SQ   SEQUENCE   416 AA;  45095 MW;  FDD4A28150072327 CRC64;

  Query Match             100.0%;  Score 715;  DB 2;  Length 416;
  Best Local Similarity   100.0%;  Pred. No. 1.2e-62;
  Matches  139;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 FYNFVILHARADEHIALRVREKLEALGVPDGATFCEDFQVPGRGELSCLQDAIDHSAFII 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         98 FYNFVILHARADEHIALRVREKLEALGVPDGATFCEDFQVPGRGELSCLQDAIDHSAFII 157

Qy         61 LLLTSNFDCRLSLHQVNQAMMSNLTRQGSPDCVIPFLPLESSPAQLSSDTASLLSGLVRL 120
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                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        158 LLLTSNFDCRLSLHQVNQAMMSNLTRQGSPDCVIPFLPLESSPAQLSSDTASLLSGLVRL 217

Qy        121 DEHSQIFARKVANTFKPHR 139
                ||||||||||||||||||
Db        218 DEHSQIFARKVANTFKPHR 236
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SEQUENCE COMPARISON "C"

```
Database :        A_Geneseq_200711:*

RESULT 1
ABP61500
ID   ABP61500 standard; protein; 712 AA.
XX
AC   ABP61500;
XX
DT   15-JUN-2007  (revised)
DT   30-SEP-2002  (first entry)
XX
DE   Human NF-kB activating protein SEQ ID NO 154.
XX
KW   Human; NF-kB; nuclear factor kappa B; mouse; antiinflammatory;
KW   immunomodulator; cytostatic; antiinfective; osteopathic; nootropic;
KW   neuroprotective; anti-HIV; autoimmune disease; cancer; infection;
KW   bone disease; AIDS; neurodegenerative disease; ischaemic disorder;
KW   BOND_PC; TIR domain containing adaptor inducing interferon-beta;
KW   TIR domain containing adaptor inducing interferon-beta [Homo sapiens];
KW   TRIF; TICAM1; PRVTIRB; MGC35334; TICAM-1;
KW   TIR domain containing adaptor inducing interferon-beta isoform 2;
KW   TICAM-1 [Homo sapiens]; putative NFkB activating protein;
KW   putative NFkB activating protein [Homo sapiens]; GO4871; GO4888; GO16020;
KW   GO43123; GO6886.
XX
OS   Homo sapiens.
XX
PN   WO200253737-A1.
XX
PD   11-JUL-2002.
XX
PF   25-DEC-2001; 2001WO-JP011389.
XX
PR   28-DEC-2000; 2000JP-00402288.
PR   26-MAR-2001; 2001JP-00088912.
PR   24-AUG-2001; 2001JP-00254018.
XX
PA   (ASAH ) ASAHI KASEI KOGYO KK.
XX
PI   Matsuda A,  Honda G,  Muramatsu S,  Nagano Y;
XX
DR   WPI; 2002-583617/62.
DR   N-PSDB; ABQ91988.
DR   PC:NCBI; gi41281981.
DR   PC:BIND; 217631,217632.
XX
PT   NF-approximatelykB activating gene and expressed protein, applicable in
PT   diagnosis and screening inhibitors or promoters to control excessive
PT   activation or inhibition for treating e.g. inflammations, autoimmune
PT   diseases and cancer.
XX
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PS   Claim 4; Page 664-669; 841pp; Japanese.
XX
CC   The invention relates to a purified protein (I), comprising one of 90
CC   fully defined sequences (ABP61424-ABP61513) or a protein based on any of
CC   the sequences but with some amino acids deleted, substituted or added and
CC   with a NF-kB (nuclear factor kappa B) activating effect. The protein and
CC   encoding gene (ABQ91912-ABQ92001) are useful in diagnosis and screening
CC   inhibitors or promoters to control excessive activation or inhibition and
CC   for treating e.g. inflammations, autoimmune diseases, cancers,
CC   infections, bone diseases, AIDS, neurodegenerative diseases or ischaemic
CC   disorders
CC
CC   Revised record issued on 15-JUN-2007 : Enhanced with precomputed
CC   information from BOND.
XX
SQ   Sequence 712 AA;

  Query Match             100.0%;  Score 3799;  DB 5;  Length 712;
  Best Local Similarity   100.0%;  Pred. No. 3.8e-250;
  Matches  712;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MACTGPSLPSAFDILGAAGQDKLLYLKHKLKTPRPGCQGQDLLHAMVLLKLGQETEARIS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MACTGPSLPSAFDILGAAGQDKLLYLKHKLKTPRPGCQGQDLLHAMVLLKLGQETEARIS 60

Qy         61 LEALKADAVARLVARQWAGVDSTEDPEEPPDVSWAVARLYHLLAEEKLCPASLRDVAYQE 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 LEALKADAVARLVARQWAGVDSTEDPEEPPDVSWAVARLYHLLAEEKLCPASLRDVAYQE 120

Qy        121 AVRTLSSRDDHRLGELQDEARNRCGWDIAGDPGSIRTLQSNLGCLPPSSALPSGTRSLPR 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 AVRTLSSRDDHRLGELQDEARNRCGWDIAGDPGSIRTLQSNLGCLPPSSALPSGTRSLPR 180

Qy        181 PIDGVSDWSQGCSLRSTGSPASLASNLEISQSPTMPFLSLHRSPHGPSKLCDDPQASLVP 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 PIDGVSDWSQGCSLRSTGSPASLASNLEISQSPTMPFLSLHRSPHGPSKLCDDPQASLVP 240

Qy        241 EPVPGGCQEPEEMSWPPSGEIASPPELPSSPPPGLPEVAPDATSTGLPDTPAAPETSTNY 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 EPVPGGCQEPEEMSWPPSGEIASPPELPSSPPPGLPEVAPDATSTGLPDTPAAPETSTNY 300

Qy        301 PVECTEGSAGPQSLPLPILEPVKNPCSVKDQTPLQLSVEDTTSPNTKPCPPTPTTPETSP 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 PVECTEGSAGPQSLPLPILEPVKNPCSVKDQTPLQLSVEDTTSPNTKPCPPTPTTPETSP 360

Qy        361 PPPPPPPSSTPCSAHLTPSSLFPSSLESSSEQKFYNFVILHARADEHIALRVREKLEALG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 PPPPPPPSSTPCSAHLTPSSLFPSSLESSSEQKFYNFVILHARADEHIALRVREKLEALG 420

Qy        421 VPDGATFCEDFQVPGRGELSCLQDAIDHSAFIILLLTSNFDCRLSLHQVNQAMMSNLTRQ 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 VPDGATFCEDFQVPGRGELSCLQDAIDHSAFIILLLTSNFDCRLSLHQVNQAMMSNLTRQ 480

Qy        481 GSPDCVIPFLPLESSPAQLSSDTASLLSGLVRLDEHSQIFARKVANTFKPHRLQARKAMW 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 GSPDCVIPFLPLESSPAQLSSDTASLLSGLVRLDEHSQIFARKVANTFKPHRLQARKAMW 540

Qy        541 RKEQDTRALREQSQHLDGERMQAAALNAAYSAYLQSYLSYQAQMEQLQVAFGSHMSFGTG 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 RKEQDTRALREQSQHLDGERMQAAALNAAYSAYLQSYLSYQAQMEQLQVAFGSHMSFGTG 600

Qy        601 APYGARMPFGGQVPLGAPPPFPTWPGCPQPPPLHAWQAGTPPPPSPQPAAFPQSLPFPQS 660
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                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 APYGARMPFGGQVPLGAPPPFPTWPGCPQPPPLHAWQAGTPPPPSPQPAAFPQSLPFPQS 660

Qy        661 PAFPTASPAPPQSPGLQPLIIHHAQMVQLGLNNHMWNQRGSQAPEDKTQEAE 712
                ||||||||||||||||||||||||||||||||||||||||||||||||||
Db        661 PAFPTASPAPPQSPGLQPLIIHHAQMVQLGLNNHMWNQRGSQAPEDKTQEAE 712
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Conclusion:

7. No claim is allowed.

Advisory Information:

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FOZIA M. HAMUD whose telephone number is (571)272-0884. The examiner can normally be reached on Monday-Friday: 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manjunath N. Rao can be reached on (571) 272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Fozia M Hamud/
Examiner, Art Unit 1647
24 December 2007